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# TECHNICAL NOTES

LAKE STATES FOREST EXPERIMENT STATION  
U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE

No. 551

## Established Forest Plantations in Northern Lower Michigan, 1957

In 1957, established forest plantations covered more than half a million acres in 34 counties in northern Lower Michigan. About 204,000 acres are on national-forest land, 158,000 acres on State-forest land, and 154,000 acres on private land.

These acreages are compiled from a survey recently completed by the Lake States Forest Experiment Station, the Lower Michigan National Forest, the Michigan Department of Conservation, and Consumers Power Company. "Acres planted" to conifers, based on record summaries, have been reported in Technical Notes 539 and 544. The acreages presented here are "established forest plantings" as determined by more than 3,000 sample plots. Although about 660,000 acres were planted, only 517,000 acres were found to be "established" forest plantings. Of the difference, 81,700 acres were accounted failures because the planted trees number less than 100 per acre or native pine reproduction is more promising than the planted trees. Trees in wind-breaks or other small plantings of less than 2½ acres make up the remainder. Only 14,700 acres of the failures have reverted to grass and brush.

Of the half-million acres of established forest plantings, 454,500 are seedlings and saplings, 62,000 acres are poletimber, and 400 acres are sawtimber (fig. 1).

Medium- and well-stocked plantations totaled 366,000 acres. Poor stocking was found on 116,400 acres of seedlings and saplings and 34,500 acres of poletimber (table 1).

Nearly 40 percent, 201,700 acres, of the established plantations have native tree overstories. Growth is very slow on understory trees. The release of suppressed plantations from overstory competition is, therefore, a primary plantation management problem. About 27,000 acres of these underplanted trees are now classed as medium- and well-stocked poletimber. For better growth most of these stands should be thinned during the next decade.

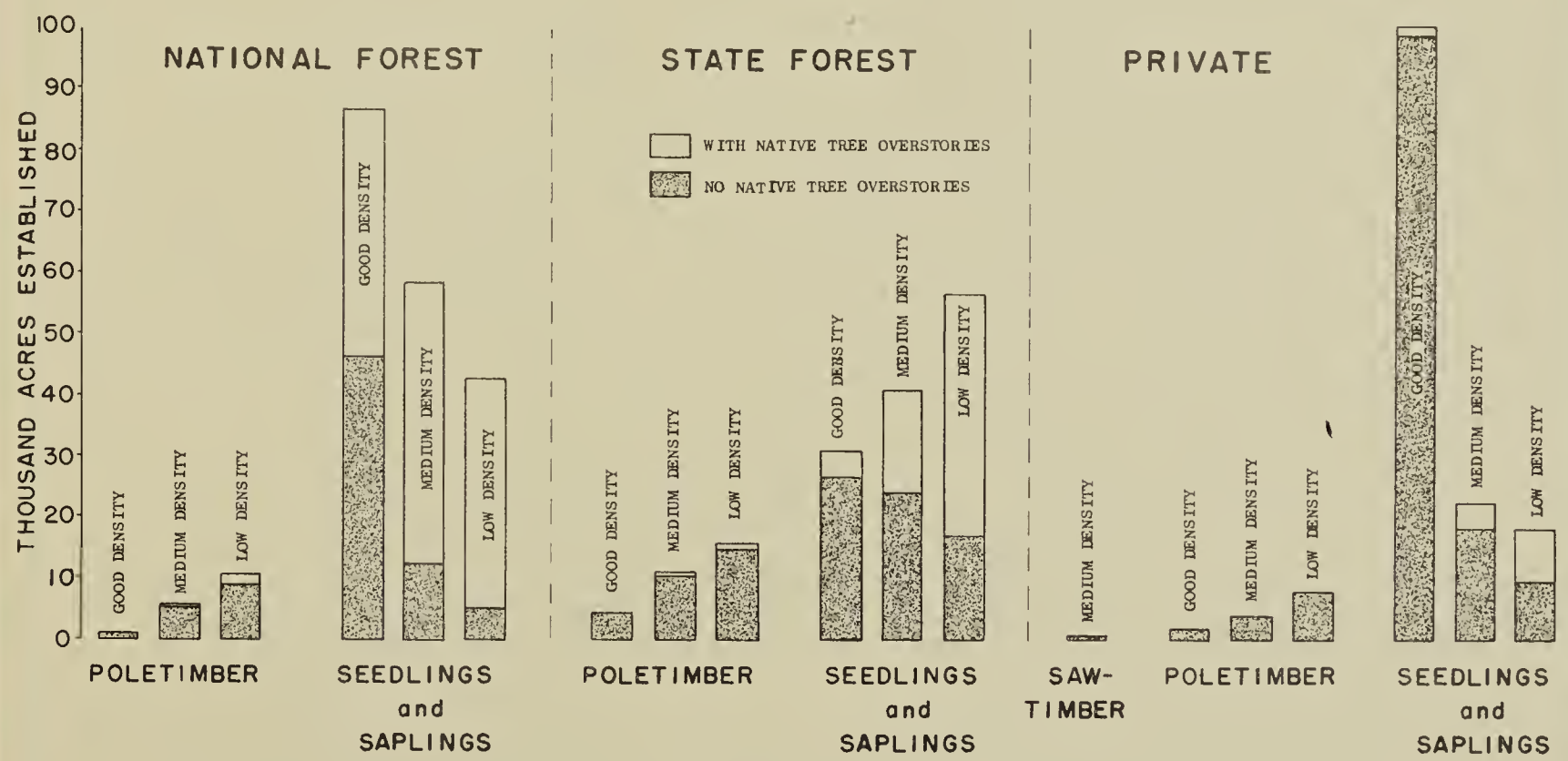


Figure 1. --Established forest plantation acreages in northern Lower Michigan by owner, size, and density.

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ROBERT N. STONE, Forester

Table 1.--Established forest plantations in northern Lower Michigan  
by owner, type, size, and density class, 1957

(In acres)					
Stand-size and density <sup>1/</sup> class	Plantation type				
	All types	White pine	Red pine	Jack pine <sup>2/</sup>	Spruce
National Forest					
Seedlings and saplings:					
Low	42,400	6,900	33,600	1,700	200
Medium	58,300	2,900	46,200	8,700	500
Good	86,300	9,700	49,700	26,800	100
Total	187,000	19,500	129,500	37,200	800
Poletimber:					
Low	10,900	-	1,900	9,000	-
Medium	5,500	-	2,800	2,700	-
Good	1,000	-	700	300	-
Total	17,400	-	5,400	12,000	-
Total National Forest	204,400	19,500	134,900	49,200	800
State Forest <sup>3/</sup>					
Seedlings and saplings:					
Low	56,100	11,500	22,600	22,000	(5/)
Medium	40,200	2,900	14,100	23,200	(5/)
Good	30,800	1,600	10,500	18,600	100
Total	127,100	16,000	47,200	63,800	100
Poletimber:					
Low	16,000	400	1,900	13,300	400
Medium	10,800	600	1,700	8,500	-
Good	4,300	100	1,500	2,700	-
Total	31,100	1,100	5,100	24,500	400
Total State Forest	158,200	17,100	52,300	88,300	500
Private <sup>4/</sup>					
Seedlings and saplings:					
Low	17,900	8,300	5,700	2,800	1,100
Medium	22,400	3,600	12,800	4,400	1,600
Good	100,100	7,400	59,100	30,800	2,800
Total	140,400	19,300	77,600	38,000	5,500
Poletimber:					
Low	7,600	1,400	2,600	3,600	-
Medium	3,800	400	2,800	600	-
Good	2,100	400	1,500	-	200
Total	13,500	2,200	6,900	4,200	200
Sawtimber:					
Medium	400	-	400	-	-
Total	400	-	400	-	-
Total Private	154,300	21,500	84,900	42,200	5,700
All Owners	516,900	58,100	272,100	179,700	7,000
Percent of area with native tree overstories	39.0	64.2	43.5	26.7	13.1

<sup>1/</sup> Stand density class definitions: Low density, 3-6.9 cords or 100-400 seedlings per acre;  
Medium density, 7-12.9 cords or 400-700 seedlings per acre;  
Good density, 13+ cords or 700+ seedlings per acre.

<sup>2/</sup> Includes Scotch pine plantations.

<sup>3/</sup> Excludes State forest plantings in Allegan County.

<sup>4/</sup> Includes plantations on county and school forests and other small public holdings.

<sup>5/</sup> Less than 50 acres.